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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD CWIAKALA, WILLIAM J. ROONEY,
PETER B. YOCOM, and HARRY M. YUDENFRIEND

Appeal 2007-3945
Application 09/407,544[1]
Technology Center 2100

Decided: May 13, 2008

Before LANCE LEONARD BARRY, ALLEN R. MACDONALD, and JAY P. LUCAS, *Administrative Patent Judges*.

LUCAS, *Administrative Patent Judge.*

DECISION ON APPEAL

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[1] Application filed September 28, 1999. The real party in interest is International Business Machines, Corporation.

STATEMENT OF CASE

Appellants appeal from a final rejection of claims 1 to 47 under authority of 35 U.S.C. § 134. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to a method and system in a computer for efficiently reconfiguring the connections, called channel paths, as needed between input/output devices and ports leading to the processors of the computer. In the words of the Appellants:

> Advantageously, at least one aspect of the present invention enables dynamic changes to be made to the I/O configurations in order to move available I/O resources to where it is needed or desired, without human intervention. This reduces the skills required for configuring I/O, and enhances overall system availability, maximizes utilization of installed channels and uses the relative priorities of workloads to distribute available I/O capacity. Further, the dynamic management capability of the present invention advantageously interfaces with one or more workload managers to identify high priority work, and to ensure that the high priority work gets the resources required to achieve its goals.

(Spec., page 5)

Claims 1 and 43 are exemplary:

1. A method of managing input/output (I/O) configurations of a computing environment, said method comprising:

> selecting a channel path from a plurality of channel paths to be used in adjusting an I/0 configuration of said computing environment, said selecting being based at least in part on an I/O velocity resulting from selecting the channel path; and

dynamically adjusting said I/0 configuration using the selected channel path.

43. A method of managing input/output (I/O) configurations of a computing environment, said method comprising:

selecting a channel path from a plurality of channel paths to be used in adjusting an I/O configuration of said computing environment, said selecting being based on a plurality of characteristics; and

dynamically adjusting said I/0 configuration using the selected channel path.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Maeurer	US 5,301,323	Apr. 5, 1994
D'Errico	US 6,434,637 B1	Aug. 13, 2002

Rejections:

R1: Claims 43, 45 and 47 stand rejected under 35 U.S.C. § 102(b) for being anticipated by Maeurer.

R2: Claims 1 to 42, 44 and 46 stand rejected under 35 U.S.C. 103(a) for being obvious over Maeurer in view of D'Errico.

Appellants contend that the claimed subject matter is not anticipated by Maeurer, or rendered obvious by Maeurer alone, or in combination with D'Errico, for failure of the references to disclose claimed limitations. The Examiner contends that each of the claims is properly rejected.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in

this opinion. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).[2]

We affirm the rejections.

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 102(b) and 103(a). The issue turns on whether Maeurer and D'Errico teach the I/O channel selection based on the limitations recited in the claims.

PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

"What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an

[2] Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group, except as will be noted in this opinion. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See In re Young,* 927 F.2d 588, 590 (Fed. Cir. 1991).

improvement must be "more than the predictable use of prior art elements according to their established functions." *Id.* at 1740. Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

ANALYSIS

From our review of the administrative record, we find that Examiner has presented prima facie cases for the rejections of Appellants' claims under 35 U.S.C. §§ 102(b) and 103(a). The prima facie cases are presented on pages 3 to 14 of the Examiner's Answer.

Rejection of Claims 43, 45 and 47 under 35 U.S.C. § 102(b)

Appellants present two main arguments against the rejection. The first argument, for claim 43, is that "In Maeurer, selection of the channel path is based solely on channel utilization, i.e., one characteristic. In contrast, appellants recite that a *plurality of characteristics* are used in making the selection of a channel path to be used in dynamically adjusting the I/O configuration." (Br. 11, last para.). True, in Maeurer, a single characteristic (the available utilization) is the controlling factor, but that available utilization itself is based on a number of other characteristics. The first factor is the presence of a working alternative channel path (CHPID). (Col. 10, l. 36.) The second is the threshold level set by the user or system

programmer which, itself, depends on the anticipated workload. (Col 11, line 48.) And finally, we see that the available utilization is based on the control unit connect time. (Col. 6, line 15). Thus, we do not find error in the Examiner applying this art to anticipate claim 43.

With regard to dependent claim 47, Appellants argue that "the dynamically adjusting of the I/O configuration involves moving the selected channel path from one port to another port. This process is not taught or suggested by Maeurer and D'Errico." (Br. 12, middle). In Maeurer, when one CHPID cannot provide sufficient available capacity, it is moved to another switch control unit (SCU). (Col. 9, l. 39.) Likewise, when an SCU is full, CHPIDs are moved to another one lest they be dropped. (Col. 9, ll. 52 *et seq.*). We note from Figure 1 that SCUs are directly connected to the Channel Subsystem #16 through the various ports P0 through P24, so in moving between SCUs the data is switching ports, as presented by the Examiner. (Answer 3, bottom).

We, thus, do not find error in the Examiner's rejection of claims 43, 45 or 47 under 35 U.S.C. § 102(b).

Rejection of Claims 1 to 42, 44 and 46 under 35 U.S.C. § 103(a)

Appellants contend that Examiner erred in rejecting claims 1 to 42, 44 and 46 under 35 U.S.C. § 103(a).

Appellants argue that the first reference, Maeurer, addresses dynamic channel path management, but fails to take into consideration input/output (I/O) velocity when making any adjustments. (Br. 7, middle.) Maeurer adjusts the configuration based on another factor, namely channel path

utilization, as discussed above. Appellants then argue that the second reference, D'Errico, discloses workload balancing in I/O operations (Br. 7, bottom) which does take into account I/O velocity, but which does not adjust the I/O configuration. (Br. 8, middle).

We are, thus, presented with two teachings of performing a function in different ways, in analogous arts (workload configuration in I/O ports in a computer). Can they be combined? For guidance we consider the recent statement of the Supreme Court: "It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1732 (2007).

Like the Examiner, we find that a person of ordinary skill would look at these two teachings and consider adjusting the I/O port of Maeurer not only on channel port utilization, but also on I/O velocity, as both factors affect the overall performance of the system. We do not find error in the Examiner's combination of the teachings.

With respect to claims 41 and 46, Appellants contend that though Maeurer may teach adding channel paths, or deleting channel paths, he does not take into consideration concurrently doing both. (Br. 9, middle). The Examiner mistakenly asserts that the concurrency is not in claims 41 and 46 (Answer 10, top); however, it is recited in those claims. Notwithstanding that error, the Examiner goes on to correctly point out in the discussion of Maeurer with respect to TABLE 1 that Maeurer has the requisite concurrent additions and subtractions of channel paths. As can be seen in column 11,

line 15, and as recited in the Answer, page 10, Maeurer not only considers concurrently adding and subtracting channel paths, as claimed, he demonstrates doing such.

In view of the forgoing, we decline to find error in the Examiner's rejections under 35 U.S.C. §103(a).

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner did not err in rejecting claims 1 to 47 as specified above in R1 and R2.

DECISION

The Examiner's rejection of claims 43, 45 and 47 under 35 U.S.C. § 102(b) is affirmed. The Examiner's rejection of claims 1 to 42, 44 and 46 under 35 U.S.C. § 103(a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

clj

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